

On the distribution of *Diaphorus lawrencei* Curran (Diptera: Dolichopodidae) in tropical Africa

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Grichanov, I. Ya., Müller, G. C., Yefremova, Z. A., Kravchenko, V. D. & Traore, M. M. On the distribution of *Diaphorus lawrencei* Curran (Diptera: Dolichopodidae) in tropical Africa. Summary. New data on the distribution of *Diaphorus lawrencei* Curran, 1926 are presented. The species is recorded from Angola, Botswana, Gabon, Gambia, Mali, Nigeria and Uganda for the first time, and is the second dolichopodid species found in Mali. A brief diagnosis and description of the habitat of *D. lawrencei* in Mali is provided.

Key words: Diptera, Dolichopodidae, *Diaphorus lawrencei*, tropical Africa, Mali, new record.

Гричанов І. Я., Мюллер Г. К., Єфремова З. А., Кравченко В. Д. і Траоре М. М. О розповсюдженні *Diaphorus lawrencei* Curran (Diptera: Dolichopodidae) в тропічній Африці. Резюме. Представлені нові матеріали по розповсюдженню *Diaphorus lawrencei* Curran, 1926. Вид вперше отмечен в Анголі, Ботсвані, Габоні, Гамбії, Малі, Нігерії та Уганді. Це другий вид доліхоподид, виявлений в Малі. Приведен короткий діагноз і характеристика місцеобитання *D. lawrencei*.

Ключевые слова: Diptera, Dolichopodidae, *Diaphorus lawrencei*, тропічна Африка, Малі, нові вказання.

Гричанов І. Я., Мюллер Г. К., Єфремова З. О., Кравченко В. Д. і Траоре М. М. Про поширення *Diaphorus lawrencei* Curran (Diptera: Dolichopodidae) у тропіках Африки. Резюме. Подано нові матеріали з поширення *Diaphorus lawrencei* Curran, 1926. Вид вперше знайдено в Анголі, Ботсвані, Габоні, Гамбії, Малі, Нігерії та Уганді, причому, виявився другим видом доліхоподид, виявленим в Малі. Приведен короткий діагноз і характеристика місцеобитання *D. lawrencei*.

Ключові слова: Diptera, Dolichopodidae, *Diaphorus lawrencei*, тропічна Африка, Малі, нові вказання.

Introduction

Until recently the predatory long-legged fly *Diaphorus lawrencei* Curran, 1926 was known only from six Afrotropical countries (Dyte & Smith, 1980). This paper presents new records for this species from Sub-Saharan Africa, a brief diagnosis and description of the Malian habitat of *D. lawrencei*. Images of the species were captured by senior author with a @Zeiss Discovery V-12 stereomicroscope and @AxioCam MRc5 camera attachment. Mohamed M. Traore made a photo of a habitat in Mali. The following abbreviations are used for depositaries: BMNH – the Natural History Museum, London, United Kingdom; MZLU – the Museum of Zoology, Lund University, Lund, Sweden; RMCA – the Royal Museum for Central Africa, Tervuren, Belgium; ZISP – the Zoological Institute, St. Petersburg, Russia. Several voucher specimens are kept in the collections of the authors.

Diaphorus lawrencei Curran, 1926 (Figs. 1–2)

Material examined. **Angola:** (A42) Rocadas, 30.03.1972, 1 ♂ / Southern African Exp. B.M. 1972-1; (A42): Rocadas, R. Cunene, 19-22.ii.1972, 1 ♀ (Southern African Exp. B.M. 1972-1); (A25): Rio Longa, 4 mls. S Lussusso, 8.03.1972, 1 ♀ (Southern African Exp. B.M. 1972-1) (BMNH); **Botswana:** (B11), Moremi reserve, 19°23' S, 23°33' E, 18-20.04.1972, 1 ♂, 2 ♀ (Southern African Exp. B.M. 1972-1) (BMNH); **Democratic Republic of Congo:** “Congo Belge”, P.N.G. [Parc National de la Garamba], Miss. H. De Saeger, Ndelele, 9, 22.02.1951, 3.12.1951, 2.01.1952, 4 ♂ (H. De Saeger, J. Verschuren) (RMCA); **Gabon:** GAM 19110, BM1, Gabon: Gamba, Ogoûé Maritime, 2°42' S / 10°01' E, 25 m, old secondary forest, 4.03.2002, 1 ♂, Syssou, Ngoma, Moussavou (ZISP); **Gambia:** outside Abuko, Nature Reserve at Waterhouse, in and at Lamin Stream, 25–26.02.1977, Loc. No. 6, UTM 28PCK215812 / Lund Univ., Syst. Dept., Sweden Gambia/Senegal, 02–03.1977, 1 ♀ (Cederholm, Danielsson, Larsson, Mirestrom, Norling, Samuelsson); outside Abuko, Nature Reserve at Waterhouse, swept in veg. at Lamin Stream, 18.11.1977, UTM 28PCK215812, Loc. 6 / Lund Univ., Syst. Dept., Sweden Gambia/Senegal. 11.1977, 1 ♀ (Cederholm, Danielsson, Hammarstedt, Hedquist, Samuelsson) (MZLU); CK 97, Keneba, rainy season, tambana water-hole / in malaise trap, terminalia woods, night/early morning, 1 ♂, 21.09.1975 (M.C.D. Speight) (BMNH); **Ghana:** E. Region, Accra, Legon,

at light, 3.03.1969, 1 ♀ (O. W. Richards, B.M. 1969-210); Legon, at light, 14, 22.02.1969, 2 ♀, (O.W. Richards, B.M. 1969-210) (BMNH); **Malawi:** “Nyasaland”, [?]Mazohuka, on lab. window, 2.02.1955, 1 ♀ (W.J. Gray, B.M. 1958-88 / C.A.S.) (BMNH); **Mali:** Dogon Plateau, Bandiagara, 14°20' N; 3°36' W, 700m, 11.2010, 50 ♂♀ (Kravchenko & Yefremova) (ZISP); R. Bakoye Bridge, swept, 12°45' N, 9° W, 21.10.1979, 2 ♂ (R. Baker) (BMNH); **Nigeria:** Zaria, 10–13.08.1963, 2 ♂, 4 ♀ (M. W. Service, B.M. 1966-200); Samaru / Mercury vapour light trap, 28.03–1.04.1970, 3–10.06.1970, 13–20.07.1970, 24–30.08.1970, 1 ♂, 3 ♀ (P.H. Ward, B.M. 1970-604); Koduna, R. Bahargo / at light, 20–21.03.1969, 1 ♂ (M. S. Service) (BMNH); **Uganda:** Budongo Forest, 7–8.02.1935, 7 ♂, 4 ♀ (F.W. Edwards, B.M. 1935-203) (BMNH).

Diagnosis. *D. lawrencei* strongly differs from the closely related *Diaphorus* species as follows: antenna yellow with sometimes darkened postpedicel. Fore and mid tarsi with large pulvilli, without claws; hind tarsus with claws; fore and hind coxae yellow; fore femur with posteroventral row of long stiff hairs in apical half; hind femur with several long ventral hairs at base and at apex; hind tibia densely covered with microscopic irregular setulae along entire posteroventral side; lower calypter with black cilia. Color of first three abdominal terga greatly variable, from mostly yellow to mostly dark dorsally. Epandrial lobe flat, suboval, twice longer than wide, with pair of apicodorsal setae positioned side by side and with short pedunculate seta at basal 1/4. Surstylus forming 2 lobes: the longest lateral lobe straight, with rounded apex, with strongest seta in middle of dorsal side and several setulae in apical half, without subapical dorsal beak and fine hairs; bare narrow hook-shaped inner lobe, apical straight part half as long as lateral lobe. Narrow process at base of surstylus equal to 1/3 length of lateral lobe and bearing short apical seta.

Distribution. Chad, Democratic Republic of Congo, Ghana, Kenya, Malawi, Mozambique, Namibia and South Africa (Grichanov et al., 2011); Angola (new record), Botswana (new record), Gabon (new record), Gambia (new record), Mali (new record), Nigeria (new record), Uganda (new record). Type locality: [Mozambique:] “Port. E.



Figs. 1–2. *Diaphorus lawrencei* Curran, total view. 1 — ♂; 2 — ♀.

Africa: Nyaka". The species seems to be common element of savannas of Sub-Saharan Africa.

Remarks. When analyzing recent Diptera catalogs (Dyde & Smith, 1980; Grichanov, 2003–2011), we found that the long-legged flies (Dolichopodidae) in the fauna of Mali remained unstudied. The only species, *Tachytrechus consobrinus* (Haliday, 1851) known from this country is widespread in Europe (Austria, Belgium, Czech, France, Germany, Ireland, Italy, Poland, Russia (Leningrad), Sweden, UK) and Africa (Morocco, Mali, Niger and Sudan). During an expedition 2010 to the inland delta of the River Niger in central Mali and the upper Niger close to the border of Guinea we collected vast amounts of Diptera with

light traps, Malaise traps and by sweeping. As a result, the second dolichopodid species was found in Mali. In addition, an indeterminable *Amblypsilopus* female was collected together with *D. lawrencei* in the same Malaise trap from Mali.

Habitat of *D. lawrencei* in Mali (Fig. 3). The species was collected in the semi-arid Sahelian zone about 600 km northeast of Bamako. Here the annual rainfall is seasonal from July to October, significant fluctuations (200 to 700 mm) are common. The vegetation is dominated by a grassy stratum with patches of open woodland dominated by some acacia species like *Acacia sieberiana* DC, *A. nilotica* (L.), *A. seyal* Del. and *A. albida* (Del.) (Fabaceae), and common



Fig. 3. Habitat of *Diaphorus lawrencei* in Mali at the end of the rainy season (November) with a small seasonal river, in the back ground with some acacia, *Piliostigma reticulatum* trees and millet fields.

fruit bearing trees like *Ziziphus mauritiana* Lam. (Rhamnaceae), *Balanites aegyptiaca* (L.) (Zygophyllaceae) and *Diospyros mespiliformis* Hochst. (Ebenaceae). Along watercourses, around ponds, and in flood plains, the dominant tree is often *Piliostigma reticulatum* (Del.) (Fabaceae). During the rainy season the area is covered in lush herbaceous vegetation but grazing cattle and goats leave most of the land barren during the hot, dry season. Only small areas are used for subsidiary agriculture that is dominated by cereal crops and various types of melons.

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